

**Listing of the Claims:**

Claim 1 (withdrawn): A nucleic acid extraction solution comprising a molecule in an amount sufficient to extract nucleic acids from a biological sample, the molecule having the formula  $R_1O-CH_2-CH_2-OR_2$ , wherein  $R_1$  and  $R_2$  independently are selected from the group consisting of hydrogen and an alkyl group.

Claim 2 (withdrawn): The solution of claim 1, wherein the alkyl group has 1-6 carbon atoms.

Claim 3 (withdrawn): The solution of claim 2, wherein the alkyl group is selected from the group consisting of methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, n-pentyl, iso-pentyl, n-hexyl, and iso-hexyl.

Claim 4 (withdrawn): The solution of claim 2, wherein the alkyl group is selected from the group consisting of methyl, ethyl, n-butyl, iso-butyl, sec-butyl, and tert-butyl.

Claim 5 (withdrawn): The solution of claim 1, wherein  $R_{sub.1}$  is methyl, ethyl, n-butyl, iso-butyl, sec-butyl, or tert-butyl and  $R_{sub.2}$  is hydrogen.

Claim 6 (withdrawn): The solution of claim 1, wherein the molecule is selected from the group consisting of 2-methoxyethanol, 2-ethoxyethanol, and 2-n-butyloxyethanol.

Claim 7 (withdrawn): The solution of claim 1, wherein the molecule is 2-methoxyethanol.

Claim 8 (withdrawn): The solution of claim 1, wherein the solution comprises from about 0.5% (v/v) to about 5% (v/v) of the molecule.

Claim 9 (withdrawn): The solution of claim 8, wherein the solution comprises about 1% (v/v) of the molecule.

Claim 10 (withdrawn): The solution of claim 1, further comprising a buffering agent.

Claim 11 (withdrawn): The solution of claim 10, wherein the buffering agent is selected from the group consisting of a Tris buffer, a MOPS buffer, and a borate buffer.

Claim 12 (withdrawn): The solution of claim 1 or 10, wherein the solution has a pH greater than about 7.

Claim 13 (withdrawn): The solution of claim 12, wherein the pH is greater than about 7 and less than about 13.

Claim 14 (withdrawn): The solution of claim 1 or 10 further comprising a detergent.

Claim 15 (withdrawn): The solution of claim 14, wherein the detergent is selected from the group consisting of Tween<sup>®</sup>, Brij<sup>®</sup>, and Triton<sup>®</sup>-X100.

Claim 16 (currently amended): A method of extracting nucleic acid from a biological sample, the method comprising: mixing the sample with a solution comprising ~~a molecule having the formula  $R_1O-CH_2-CH_2-OR_2$ , wherein  $R_1$  and  $R_2$  independently are selected from the group consisting of hydrogen and an alkyl group~~ about 1% 2-methoxyethanol and borate buffer, so that nucleic acid is released from cells or cellular debris in the sample.

Claims 17-23 (cancelled)

Claim 24 (currently amended): The method of claim 16 ~~or 22~~, wherein the solution has a pH greater than about 7.

Claim 25 (original): The method of claim 24, wherein the pH is greater than about 7 and less than about 13.

Claim 26 (original): The method of claim 16 comprising the additional step of heating the

mixture to a temperature within the range of from about 50° C. to about 100° C.

Claim 27 (original): The method of claim 26, comprising heating the mixture to a temperature of from about 75° C. to about 100° C.

Claim 28 (original): The method of claim 27, comprising heating the mixture to a temperature of from about 90° C. to about 100° C.

Claim 29 (cancelled)

Claim 30 (original): The method of claim 16, comprising the additional step of amplifying a nucleic acid sequence extracted from the sample.

Claim 31 (original): The method of claim 16, comprising the additional step of detecting a nucleic acid sequence extracted from the sample.

Claim 32 (original): The method of claim 30, wherein the amplification step uses a pair of amplification primers comprising the sequences of SEQ ID NOS: 4 and 5.

Claim 33 (original): The method of claim 32, comprising the additional step of detecting the presence of the nucleic acid sequence with a probe comprising the sequence of SEQ ID NO: 3.

Claim 34 (original): The method of claim 30, wherein the amplification step uses a pair of amplification primers comprising the sequences of SEQ ID NOS: 8 and 9.

Claim 35 (original): The method of claim 34, comprising the additional step of detecting the presence of nucleic acid sequence a probe comprising the sequence of SEQ ID NO: 10.

Claim 36 (original): The method of claim 16, wherein the method lacks a chloroform extraction step, a phenol extraction step, a phenol/chloroform extraction step, or an alcohol